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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/591,005	08/29/2006	Fumio Matsuoka	13006.123	4835

7590 04/22/2009  
Fildes & Outland  
Suite 2  
20916 Mack Avenue  
Grosse Pointe Woods, MI 48236

EXAMINER
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FANG, SHANE

ART UNIT	PAPER NUMBER
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1796

MAIL DATE	DELIVERY MODE
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04/22/2009

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/591,005	<b>Applicant(s)</b> MATSUOKA ET AL.	
	<b>Examiner</b> SHANE FANG	<b>Art Unit</b> 1796	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 17 February 2009.
- 2a) ☒ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## DETAILED ACTION

### *Response to Amendment*

1. The ODP rejections on claims 1-2, 9-11, and 15-20 over 11/629,264 are **maintained**.
2. The 102/103 rejections on claims 1-7 and 12 over **Wang et al. (US 5952433)** have been overcome by amendment.
3. The 102/103 rejections on claims 8-11 and 13-20 over **Deckwer et al. (US 6150490)** have been overcome by amendment.

### *Claim Rejections - 35 USC § 103*

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-7 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Wang et al. (US 5952433)** in view of **Wang et al. (US 20020128382)**.

Disclosure of Wang et al. (433') is adequately set forth in paragraph 3 of the previous office action and is incorporated herein by reference.

Wang et al. (433') is silent on "the (meth)acrylic ester having two or more (meth)acryl groups or having one or more glycidyl groups or vinyl groups in the molecule" as recited in amended claim 1.

Wang et al. (382') discloses grafting a polar monomer such as glycidyl acrylate (reads on the amendment of instant claim 1, claim 8) to a biodegradable

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polycaprolactone, a linear aliphatic polyester, to enhance compatibility with water soluble polymers (PVOH) than the unmodified biodegradable polymers ([0039]). Note the primary reference, Wang et al. (433'), discloses adding PVOH to PLA (Ex. 2).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have incorporated disclosures of Wang et al. (433' and 382') to develop a biodegradable polyester composition comprising aliphatic polyester grafted with glycidyl acrylate. The suggestion/motivation would have been to enhance compatibility with water soluble polymers.

6. Claim 8-11 and 13-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Wang et al. (US 5952433)** in view of **Wang et al. (US 20020128382)** and in further view of **Deckwer et al. (US 6150490)**.

Disclosure of Wang et al. (433' and 382') is adequately set forth in paragraph 4 is incorporated herein by reference.

Wang et al. (433' and 382') is silent on molding, foam, etc. as recited in claims 8-11 and 13-20.

Decker et al. discloses biologically degradable polyesters that can be processed, for example by thermoplastic processes such as compression moulding, extrusion, coextrusion, injection moulding, melt spinning, thermoforming, foaming or blow moulding into flat material, e.g. films, or into moulded parts or, by suitable methods, into foamed moulded parts, laminates, filamentous materials, fibres or composite materials (Col4, ll 42-48). Note Wang et al. 433' also discloses fibers made from biodegradable PLA (Ex. 2).

Decker et al. teaches a general method of making fibers, molding and foam articles based on biodegradable polyester via blow molding, injection, and extrusion. In light of this equivalent process and end product disclosed by Decker et al., one of ordinary skill in the art would develop molding and foam articles based on biodegradable polyester disclosed by Wang et al. (433' and 382') via blow, injection, and extrusion as recited in claims 8-11 and 13-20.

### ***Response to Arguments***

7. Applicant's arguments, with respect to amendment have been fully considered and persuasive. The previous rejections on claims 1-20 have been withdrawn.

8. The amendment that introduces further limitation of (meth)acrylic ester in amended claims 1 and 4 is disclosed in the original specification. However, the amendment changes the scope of claimed inventions.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

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the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

### ***Conclusions***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to SHANE FANG whose telephone number is (571)270-7378. The examiner can normally be reached on Mon.-Thurs. 8 a.m. to 6:30 p.m. EST..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Randy Gulakowski can be reached on (571) 272-1302. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Sf

/Randy Gulakowski/

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Supervisory Patent Examiner, Art Unit 1796